

REMARKS/ARGUMENTS

A. SELECTED COMMENTS CONCERNING THE DISCLOSURE

The disclosure makes a significant recognition that a handover decision based on a single parameter e.g. RSCP or Ec/No is less than ideal in a handover situation from GSM to WCDMA. According to prior art the decisions in the respective systems are based on different parameters, thus leaving a large room for error in selecting an optimal cell when handover is deemed necessary. Especially, both the Ec/No and the RSCP value at a certain geographical position can be very good at a low traffic load in the network, while the same position may show a quite bad Ec/No value at a higher traffic load whilst maintaining a passable RSCP value. In the same manner, the Ec/No may be very good at a low traffic load, whilst the RSCP is bad at the same low traffic load. This results in a very real risk that for varying traffic load any handover decision is bound to be flawed if the traffic load varies, thus making it difficult to define an optimal GSM to UTRAN handover parameter setting.

In order to overcome the above mentioned problems, Applicants discloses a solution where a first and a second parameter relating to quality and signal strength (e.g. Ec/No and RSCP) are measured and reported simultaneously for each UTRAN cell in the network. In the description, it is clearly stated that the two parameters (e.g. first and second) are measured and reported to the bases station controller. Handover to a new cell is initiated and completed based on both of the reported parameters. Thus, Applicants' handover is not performed or decided upon until both parameters have been reported and taken into consideration. In order to further optimize the reporting format, the values of the two measured parameters are included in a same field in a standardized Measurement Report message and are reported simultaneously according to one of a respective plurality of value ranges.

Moreover, Applicants' disclosure concerns a user terminal in active mode. The user terminal performs measurements, reports those measurements to the base station controller, and the base station controller performs evaluation of the reported parameters and decides about handover based on the reported parameters.

B. THE PRIOR ART REJECTIONS

Claims 27-29, 31-37, 39-42 and 44-47 stand rejected under 35 USC 103(a) as being anticipated by U.S. Publication 2004/0082328 to Japenga et al in view of U.S. Publication 2003/0207691 to Chen and alleged evidenced by US Patent Publication 2002/0077140 to Monogioudis. Claims 30, 38 and 43 stand rejected under 35 USC §103(a) as being unpatentable over U.S. Publication 2004/0082328 to Japenga et al in view of U.S. Publication 2003/0207691 to Chen, further in view of 3GPP Tech. Spec. 25.215 v.3.1.0. All prior art rejections are respectfully traversed for at least the following reasons.

C. PATENTABILITY OF THE CLAIMS

US patent application publication US2004/0082328 by Japenga discloses a technique for inter-RAT cell reselection in a wireless communication system. A first parameter associated with a wireless cell is compared to a first criterion. If the first parameter satisfies the criterion, the cell is reselected for wireless communication. Upon reselection of the cell, a second parameter associated with the cell is compared to a second criterion. If the second parameter does not satisfy the second criterion the first criterion is modified. Subsequently, the cell is deselected if the second parameter does not satisfy the second criteria.

Thus, a user terminal of Japenga might end up bouncing back and forth between two cells if the second and first criteria are not both satisfied. Moreover, Japenga concerns a user terminal in idle mode. All measurements and evaluations of parameters,

and decisions to reselect a cell are performed in the user terminal. Consequently, there is no need to report measurements.

U.S. Publication 2003/0207691 to Chen discloses a method of communicating between a network and the mobile device by eliminating repetitive contents within one communication message, e.g., a measurement request message, in a wireless communication system. Basically, by including or not including channel ID and/or channel type values in their designated fields in the measurement request, communicated parameters are applied to only selected channels, only selected channels of a predetermined type, or to all channels. Consequently, identical event parameters for multiple channels or channel types are only communicated once in one joint measurement request. In summary, Chen relates to communication in signaling messages avoiding duplicate information in messages etc.

US Patent Publication 2002/0077140 to Monogioudis concerns power control and how to avoid transmitting on unnecessary high power levels at the BTS during soft handoff/handover. This is enabled by a common control point receiving individual user channel transmit powers from each of a number of base stations. In addition, the common control point receives the identity for the base station involved in the soft handover that has the strongest received signal at the mobile terminal, and a value representing how much stronger the received SNR was in comparison to the SNR target maintained by the mobile terminal. The common control point then decides on a downlink reference user channel transmit power for each of the base stations.

Japenga discuss the problems of using only one of RSCP and E_c/N_0 as criteria when going from WCDMA to GSM. However, Japenga only considers idle mode and hence do not involve measurement reports. Applicants' claims, by contrast, focus on active mode and how to modify the measurement report in order to alleviate the problems

of separate criteria. Japenga's technology sets up a situation where a user may bounce between two cells, an undesirable situation which Applicants' technology avoids.

The technology of Japenga measures one parameter, reselects a cell, then measures a second parameter and possibly deselects the cell again. No mention is made by Japenga of jointly utilizing both parameters before making a handover. In addition, the Japenga user terminal adjusts the criteria for the first parameter if the second parameter evaluation fails, thus changing the conditions for a future reselection of the same cell. Applicants need not require any comparable adjustments of criteria. Instead, Applicants utilize two parameters before reselecting a cell or performing handover, so that there is no need to adjust any criteria.

In addition, the Japenga user terminal algorithm does not allow the operator to tailor and optimize the IRAT handover criteria as do Applicants. Japenga is constrained in this respect since Japenga's technology essentially resides in a network-controlled node. The Japenga cell reselection is already made (based on only CPIC Ec/No as in Fig. 4) before the two measurement criteria are used. In contrast, Applicant allows for usage of both measurement criteria (CPICH Ec/No and CPIC RSCP) *before* a IRAT HO is made, so that Applicants facilitate a more optimized handover decision from the beginning.

Applicants also facilitate the possibility to record statistics in the network node regarding, e.g., what criteria was fulfilled, and what was not, during the user equipment unit (UE) operation in a multi-RAT network. In so doing, Applicants both optimize the handover performance, and general network performance.

Thus, Japenga requires evaluating a first parameter, reselecting a cell, and subsequently evaluating a second parameter before making a final decision about if to stay on the reselected cell or not. Applicants, by contrast, disclose measuring two

parameters, *jointly evaluating* those two parameters, and finally initiating handover *based on that joint evaluation*. Consequently, no change of cell is initiated before both parameters have been taken into account.

Chen discloses communication from the network to a user terminal by reducing duplicate reported settings for the various channels. In other words, if two or more channels are to be set according to the same parameters, the parameters only need to be transmitted once. Applicants, by contrast, instead of once for each channel as is commonly known, deal with communication going the opposite direction, e.g. from the user terminal to the network (specifically, Applicants' communication enclosed in the Measurement Report). Consequently, Chen and Applicants address opposite scenarios and deal with two different problems. Chen deals with reducing excessive signaling; Applicants deal with reducing unnecessary cell reselection and improved cell reselection. Consequently, Chen does not discuss or hint at the possibility of reporting two parameters at the same time in a same field in a Measurement Report.

Based on the above discussion, neither Japenga, Chen, nor Monogioudis, nor a combination of the three undermine the novelty or inventiveness of Applicants' independent claims.

D. MISCELLANEOUS

In view of the foregoing and other considerations, all claims are deemed in condition for allowance. A formal indication of allowability is earnestly tied.

The Commissioner is authorized to charge the undersigned's deposit account #14-1140 in whatever amount is necessary for entry of these papers and the continued pendency of the captioned application.

Should the Examiner feel that an interview with the undersigned would facilitate allowance of this application, the Examiner is encouraged to contact the undersigned.

Respectfully submitted,

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